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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,499	01/16/2004	Edward P. Donlon	21223.711.301	7663
21971	7590	11/24/2004	EXAMINER	
WILSON SONSINI GOODRICH & ROSATI			GAGLIARDI, ALBERT J	
650 PAGE MILL ROAD			ART UNIT	
PALO ALTO, CA 943041050			PAPER NUMBER	
			2878	

DATE MAILED: 11/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/759,499

Applicant(s)

DONLON ET AL.

Examiner

Albert J. Gagliardi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 October 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 34-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 34-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities:

The status of US application 10/315,925 should be updated.

Appropriate correction is required.

### ***Information Disclosure Statement***

2. The examiner has considered information considered by the Office in parent application 10/315,925 when examining this continuing application, and the application file reflects that fact. A list of the information need not be submitted in the continuing application unless the applicant desires the information to be printed on the patent. See MPEP § 609.

### ***Claim Rejections - 35 USC § 112***

3. Claim 43 and 53 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: components and/or antecedent basis for varying drag across a rotation shaft, and components and/or antecedent basis responsible for the constant angular velocity.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 34-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cantu *et al.* (US 5,635,728).

Regarding claim 34, Cantu **Fig. 4** discloses a method for scanning an object comprising rotating a drive shaft at least partly by driving a motor shaft couple to the drive shaft (col. 8, lines 1-5; and moving an object (34) along a longitudinal axis of the drive shaft.

Cantu does not disclose that the shaft is flexibly coupled or that a portion of the drive shaft is allowed to move laterally.

Regarding the flexible coupling, it is well known in the art to use a flexible coupling to connect a motor to a drive shaft, such couplings allowing the longitudinal axis of the drive shaft to move laterally relative to the rotational axis of the motor shaft.

Kerr, for example, discloses (Fig. 8) an imaging system including suggesting a method of rotating a drive shaft (293) by rotating a motor shaft (302) flexibly couple to the drive shaft; allowing a portion of the drive shaft to move laterally relative to a rotational axis of the motor shaft (i.e., accommodates misalignment – col. 16, lines 15-18); and moving an object (210) along a longitudinal axis of the drive shaft. Kerr also teaches that besides allowing lateral movement,

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the coupling has the benefit of permitting easy removal and replacement of the driven shaft without disassembly of the other components.

Therefore, it would have been obvious to a person of ordinary skill in the art to modify the method suggested by Cantu to include a flexible coupling so as to accommodate any misalignment of components and allow for easy repair and replacement.

Regarding claim 35, Cantu discloses rotating a storage layer screens (14) adjacent to the object (34).

Regarding claim 36, Cantu discloses the screens are rotated about an axis substantially parallel to the rotational axis of the motor shaft (see generally Fig. 4).

Regarding claim 37, Cantu discloses the rotating is at least partly in response to the rotating (see generally Figs. 4 and 8).

Regarding claim 37, Cantu discloses the rotating is at least partly in response to the rotating (see generally Figs. 4 and 8).

Regarding claim 38, although not specifically disclosed by Cantu, it is typical in the art to perform scanning at a constant speed. Therefore, absent some degree of criticality, moving the object at a constant speed would have been a matter of routine design choice within the skill of a person of ordinary skill in the art depending on the needs of the particular application.

Regarding claims 39-41, it is well known that flexible joints typically allow the longitudinal axis of the drive shaft to accommodate some degree of motion, including at least 1 to at least 10 degrees relative to the rotation of the motor shaft. The particular range of motion would be an obvious design choice within the skill of a person of ordinary skill in the art.

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Regarding claim 42, an inherent aspect of performing scanning at a constant speed is that the shaft rotates at substantially constant velocity.

Regarding claim 43, as best understood, the constant angular velocity is a result of the use of a flexible coupling. As such, constant angular velocity is viewed as an inherent aspect of flexibly coupling the drive shaft.

Regarding claims 44-53, the method as suggested by Cantu and Kerr, as applied to claims 34-43 above, suggests the apparatus as recited according to claims 44-53 and is rejected accordingly.

### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 34-53 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,492,654. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to reword the apparatus claims of the patent so as to create methods-type claims (claims 34-43) or means-plus-function-type claims (claims 44-53) in order to effect claims differing in scope. The examiner also notes that it would have been obvious to modify

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the claims to include additional, but otherwise obvious or inherent limitations (i.e., limitation relating to the relative degree of flexibility of the elements) so as to further effect claims differing in scope.

9. Claims 34-53 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-30 of U.S. Patent No. 6,198,111. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to reword the apparatus claims of the patent so as to create methods-type claims (claims 34-43) or means-plus-function-type claims (claims 44-53) in order to effect claims differing in scope. The examiner also notes that it would have been obvious to modify the claims to include additional, but otherwise obvious or inherent limitations (i.e., limitation relating to the relative degree of flexibility of the elements) so as to further effect claims differing in scope.

### ***Conclusion***

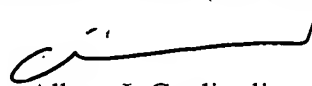
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert J. Gagliardi whose telephone number is (571) 272-2436. The examiner can normally be reached on Monday thru Friday from 9 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Albert J. Gagliardi  
Primary Examiner  
Art Unit 2878

AJG